



California Regional Water Quality Control Board

Santa Ana Region



Alan C. Lloyd, Ph.D.
Agency Secretary

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Arnold Schwarzenegger
Governor

January 30, 2006

Base Realignment and Closure
Attn: Mr. Darren Newton
BRAC Environmental Coordinator
7040 Trabuco Road
Irvine, California 92618

**COMMENTS ON SITE ASSESSMENT ADDENDUM REPORT, UNDERGROUND STORAGE TANK (UST) SITE 367, FORMER MARINE CORPS AIR STATION, EL TORO, SWRCB
GEOTRACKER ID: T0605901293**

Dear Mr. Newton:

We have reviewed the above referenced document, dated October 20, 2005, which we received on November 23, 2005. We have the following comments:

- **4.2 SVE System Monitoring Data**, Page 4-1, first paragraph: The last two sentences identify that "several" system shut downs occurred during the pilot study for two reasons. Since no operation log is presented in the appendix, the effect of system shut down on the pilot study is an unknown factor. This study was designed to test the feasibility of using a vapor extraction well to remove the volatile portion of a diesel range contaminant, at an inaccessible site, located at least 20 feet away from the well. The test period was two weeks. The report states that the system was started and stopped for unidentified periods of time, on several occasions over a two-week test. The interrupted operation of the remedial system could be a large factor in the study results, which show that there was negligible contaminant mass removal.
- **4.2 SVE System Monitoring Data**, Page 4-1, second paragraph: The photo ionization detector (PID) was calibrated to a hexane standard. The principle contaminant of concern is fuel oil, similar to diesel fuel, C₁₀ through C₁₉. The PID readings would need conversion for determining diesel contaminant concentrations, if the instrument was equipped with a source of sufficient energy to detect diesel range contamination. No conversion calculations are presented or discussed.
- **4.3 PILOT TEST LABORATORY RESULTS**, Page 4-5: All samples for field and laboratory analysis were collected in Tedlar® bags. According to the laboratory reports, the samples were collected on one day, and analyzed either one or two days after collection, or possibly stored for an even longer period. The laboratory reports identify an unknown day of sampling. Samples collected in Tedlar® bags should be analyzed as soon as possible we commonly require analysis within four hours. After four hours, these types of samples are known to lose volume and contaminant mass. In addition, exposure to light can also affect hydrocarbon contaminant mass or concentration. Samples collected in Tedlar® bags and

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not analyzed within four hours can result in the probability of a laboratory analytical result showing biased low concentration of volatile total petroleum hydrocarbons or other volatile organic compounds.

- **APPENDIX D, LABORATORY REPORT, HAND AUGER AND GROUNDWATER**

SAMPLING: All samples submitted for analysis by U.S. EPA Standard Method TO-3, total petroleum hydrocarbon (TPH) had results reported only in gasoline range. Again, the principle contaminant of concern is fuel oil, similar to diesel fuel, C₁₀ through C₁₉ not gasoline. Again, a calculation is required to convert gasoline concentration into a diesel concentration. We could also imply from the report that only gasoline range concentration was measured, not the range of the expected principle contaminant concentration. Since the chain of custody form indicate that analysis was requested for both gasoline and diesel range, it is unclear why all of the analytical results were reported only for gasoline range contamination at an essentially diesel range contamination site. As stated above, this could imply that the diesel range component was not measured and reported.

As a result of our review, we are not confident that the pilot study completely tested and measured the effectiveness of a soil vapor extraction remedy for the release at the UST 367 Site. Therefore, we do not concur with your recommendations for the destruction of the three vapor extraction wells. As stated in the Site Assessment Addendum, the release to soil is from the beneath the UST, and extends down to the groundwater. We believe that the beneficial uses of the groundwater remain threatened and impacted by this site. Corrective Action is necessary to abate the threat and the impacts to the beneficial uses of the Irvine Groundwater Management Zone.

For any questions, please call me at (951) 782-4494, or send email to jbroderick@waterboards.ca.gov.

Sincerely,


John Broderick
SLIC/DoD Section

cc via email: Ms. Lynn Hornecker, NAVFACENGCOM, Southwest Division

